

--Joe Student 1234567

--Question 1 Drop tables, create tables, insert data, set RI

drop TABLE EMPLOYEE cascade ;

drop TABLE DEPARTMENT cascade;

drop TABLE DEPT_LOCATIONS cascade;

drop TABLE PROJECT cascade;

drop TABLE WORKS_ON cascade ;

drop TABLE DEPENDENT cascade;

```
CREATE TABLE EMPLOYEE (  
    Fname  varchar (15) NOT NULL,  
    Minit  char (1) NULL,  
    Lname  varchar (15) NOT NULL,  
    Ssn    char (9) NOT NULL,  
    Bdate  date  NULL,  
    Address varchar (30) NULL,  
    Sex    char (1) NULL,  
    Salary decimal (10,2) NULL,  
    Super_ssn char (9) NULL,  
    Dno    int  NOT NULL,  
    PRIMARY KEY (      Ssn )  
);
```

```
CREATE TABLE DEPARTMENT (  
    Dname  varchar (15) NOT NULL,  
    Dnumber int  NOT NULL,  
    Mgr_ssn char (9) NOT NULL,  
    Mgr_start_date date  NULL,
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PRIMARY KEY (Dnumber),

UNIQUE (Dname)

);

CREATE TABLE DEPT_LOCATIONS (

Dnumber int NOT NULL,

Dlocation varchar (15) NOT NULL,

PRIMARY KEY

(Dnumber , Dlocation)

);

CREATE TABLE PROJECT (

Pname varchar (15) NOT NULL,

Pnumber int NOT NULL,

Plocation varchar (15) NULL,

Dnum int NOT NULL,

PRIMARY KEY (Pnumber),

UNIQUE (Pname)

);

CREATE TABLE WORKS_ON (

Essn char (9) NOT NULL,

Pno int NOT NULL,

Hours decimal (3, 1) NULL,

PRIMARY KEY (Essn , Pno)

);

CREATE TABLE DEPENDENT (

Essn char (9) NOT NULL,

Dependent_name varchar (15) NOT NULL,

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        Sex    char (1) NULL,
        Bdate  date  NULL,
        Relationship  varchar (8) NULL,
PRIMARY KEY (      Essn , Dependent_name )
);

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INSERT INTO DEPARTMENT VALUES ('Headquarters',1,'888665555','1981-06-
19'),('Administration',4,'987654321','1995-01-01'),('Research',5,'333445555','1988-05-22');

```

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INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('123456789','Alice','F','1988-12-30','Daughter');
INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('123456789','Elizabeth','F','1967-05-05','Spouse');
INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('123456789','Michael','M','1988-01-04','Son');
INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('333445555','Alice','F','1986-04-05','Daughter');
INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('333445555','Joy','F','1958-05-03','Spouse');
INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('333445555','Theodore','M','1983-10-25','Son');
INSERT INTO DEPENDENT (Essn,Dependent_name,Sex,Bdate,Relationship) VALUES
('987654321','Abner','M','1942-02-28','Spouse');

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INSERT INTO DEPT_LOCATIONS (Dnumber,Dlocation) VALUES (1,'Houston');
INSERT INTO DEPT_LOCATIONS (Dnumber,Dlocation) VALUES (4,'Stafford');
INSERT INTO DEPT_LOCATIONS (Dnumber,Dlocation) VALUES (5,'Bellaire');
INSERT INTO DEPT_LOCATIONS (Dnumber,Dlocation) VALUES (5,'Houston');
INSERT INTO DEPT_LOCATIONS (Dnumber,Dlocation) VALUES (5,'Sugarland');

```

```

INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('James','E','Borg','888665555','1937-11-10','450 Stone, Houston, TX','M',55000,null,1);

```

```

INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('Jennifer','S','Wallace','987654321','1941-06-20','291 Berry, Bellaire,
TX','F',43000,'888665555',4);
INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('Franklin','T','Wong','333445555','1955-12-08','638 Boss, Houston,
TX','M',40000,'888665555',5);
INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('Ahmad','V','Jabbar','987987987','1969-03-29','980 Dallas, Houston,
TX','M',25000,'987654321',4);
INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('Alicia','J','Zelaya','999887777','1968-01-19','3321 Castle, Spring,
TX','F',25000,'987654321',4);
INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('John','B','Smith','123456789','1965-01-09','731 Fondren, Houston,
TX','M',30000,'333445555',5);
INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('Joyce','A','English','453453453','1972-07-31','5631 Rice, Houston,
TX','F',25000,'333445555',5);
INSERT INTO EMPLOYEE (Fname,Minit,Lname,Ssn,Bdate,Address,Sex,Salary,Super_ssn,Dno)
VALUES ('Ramesh','K','Narayan','666884444','1962-09-15','975 Fire Oak, Humble,
TX','M',38000,'333445555',5);

```

```

INSERT INTO PROJECT (Pname,Pnumber,Plocation,Dnum) VALUES ('ProductX',1,'Bellaire',5);
INSERT INTO PROJECT (Pname,Pnumber,Plocation,Dnum) VALUES ('ProductY',2,'Sugarland',5);
INSERT INTO PROJECT (Pname,Pnumber,Plocation,Dnum) VALUES ('ProductZ',3,'Houston',5);
INSERT INTO PROJECT (Pname,Pnumber,Plocation,Dnum) VALUES
('Computerization',10,'Stafford',4);
INSERT INTO PROJECT (Pname,Pnumber,Plocation,Dnum) VALUES
('Reorganization',20,'Houston',1);
INSERT INTO PROJECT (Pname,Pnumber,Plocation,Dnum) VALUES
('Newbenefits',30,'Stafford',4);

```

```

INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('123456789',1,32.5);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('123456789',2,7.5);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('333445555',2,10);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('333445555',3,10);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('333445555',10,10);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('333445555',20,10);

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```
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('453453453',1,20);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('453453453',2,20);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('666884444',3,40);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('888665555',20,null);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('987654321',20,15);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('987654321',30,20);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('987987987',10,35);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('987987987',30,5);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('999887777',10,10);
INSERT INTO WORKS_ON (Essn,Pno,Hours) VALUES ('999887777',30,30);
```

ALTER TABLE EMPLOYEE ADD constraint EmployeeSupervisedByFK FOREIGN KEY(Super_ssn)
REFERENCES EMPLOYEE (Ssn)
on delete set null
on update cascade;

ALTER TABLE EMPLOYEE ADD constraint EmployeeWorksInDepartmentFK FOREIGN KEY(Dno)
REFERENCES DEPARTMENT (Dnumber)
on delete restrict
on update restrict;

ALTER TABLE WORKS_ON ADD constraint EmployeeWorksOnProjectFK FOREIGN KEY(Essn)
REFERENCES EMPLOYEE (Ssn)
on delete cascade
on update cascade;

ALTER TABLE WORKS_ON ADD constraint ProjectWorkedOnByEmployeeFK FOREIGN KEY(Pno)
REFERENCES PROJECT (Pnumber)
on delete restrict
on update restrict;

ALTER TABLE DEPT_LOCATIONS ADD constraint DepartmentHasLocationFK FOREIGN
KEY(Dnumber)
REFERENCES DEPARTMENT (Dnumber)
on delete restrict
on update restrict;

ALTER TABLE DEPENDENT ADD constraint DependentRelatedToEmployeeFK FOREIGN
KEY(Essn)
REFERENCES EMPLOYEE (Ssn)
on delete cascade
on update cascade;

ALTER TABLE DEPARTMENT ADD constraint DepartmentHasMangerFK FOREIGN KEY(Mgr_ssn)
REFERENCES EMPLOYEE (Ssn)
on delete restrict
on update cascade;

ALTER TABLE Project ADD constraint ProjectControlledByDepartmentrFK FOREIGN KEY(dnum)
REFERENCES Department (dnumber)
on delete restrict
on update restrict;